Amendments to Claims

1. (Previously Presented) An electroluminescence generating device comprising
   a. a channel of a single thin layer of a single polycrystalline small molecule material, whereby said polycrystalline small molecule material has a crystal grain size and said channel is able to carry electrons and holes;
   b. an electron electrode, said electron electrode being in contact with said channel and positioned on top of a first side of said channel layer or within said channel layer, said electron electrode being able to inject electrons in said channel layer;
   c. a hole electrode, said hole electrode being spaced apart from said electron electrode, said hole electrode being in contact with said channel and positioned on top of said first side of said channel layer or within said channel layer, said hole electrode being able to inject holes into said channel;
   d. a control electrode positioned on said first side or on a second side of said channel;

whereby light emission of said electroluminescence generating device can be acquired by applying an electrical potential difference between said electron electrode and said hole electrode.

2. (Previously Presented) The electroluminescence generating device according to claim 1, further comprising a dielectric layer between said channel and said control electrode.

3. (Previously Presented) The electroluminescence generating device according to claim 2, wherein said dielectric layer comprises at least one material selected from the group consisting of silicon oxide, alumina, polyimide and polymethylmethacrylate.

4. (Currently Amended) The electroluminescence generating device according to claim 1, wherein at least one of said electron electrode and said hole electrode comprise at least one different material which is not comprised in another of the electron electrode and the hole electrode ~~the other one~~.

5. (Previously Presented) The electroluminescence generating device according to claim 1, said electron electrode comprises one or more elements selected from the group consisting of Au, Ca, Mg, Al, In, and Perovskite Manganites.

6. (Previously Presented) The electroluminescence generating device according to claim 1, wherein said hole electrode comprises at least one material selected from the group consisting of Au, indium tin oxide, Cr, Cu, Fe, Ag, poly(3,4-ethylenedioxythiophene) combined with poly(styrene sulfonate), and Perovskite Manganites.

7. (Canceled)

8. (Currently Amended) The electroluminescence generating device according to claim 1 wherein said polycrystalline small molecule ~~channel comprises at least one~~ material is selected from the group consisting of tetracene, pentacene, perylene, terthiophene, tetrathiophene, quinquethiophene, sexithiophene, bora-diazaindacene, and porphyrin.

9-11. (Canceled)

12. (Previously Presented) The electroluminescence generating device according to claim 1, wherein said hole electrode and said electron electrode are spaced apart at a distance between 5 nm and 5 microns.

13. (Previously Presented) The electroluminescence generating device according to claim 1, wherein said electron electrode and said hole electrode have digitated structures comprising a regular repetition of a basic finger structure, and are positioned such that said basic finger structures of respectively hole and electron electrodes are alternating each other, and is characterized by two in-plane distances P and R between the basic finger structures.

14. (Previously Presented) The electroluminescence generating device according to claim 13, wherein said P and R are equal.

15. (Previously Presented) The electroluminescence generating device according to claim 1, wherein said control electrode is an injection control electrode, said injection control electrode being positioned on said second side of said channel, whereby the application of an electrical potential difference between said control electrode and said hole electrode or electron· electrode facilitates the injection of charge carriers into said channel.

16. (Previously Presented) The electroluminescence generating device according to claim 1, wherein said control electrode is a current control electrode, said current control electrode being positioned on said second side of said channel, whereby the application of an electrical potential difference between said control electrode and said electron and/or hole electrode allows to control the current of at least one type of charge carriers.

17-18. (Canceled).

19. (Previously Presented) The electroluminescence generating device according to claim 1, further comprising optical confinement and/or waveguiding layers on said first and/or said second side of said channel.

20. (Previously Presented) The electroluminescence generating device according to claim 1, further comprising optical resonating structures or cavities on said first and/or said second side of said channel.

21. (Previously Presented) The electroluminescence generating device according to claim 1, further comprising a flexible or rigid substrate.

22. (Previously Presented) The electroluminescence generating device according to claim 1, wherein said channel is a channel formed by sublimation of small molecules.

23. (Canceled)

24. (Previously Presented) The electroluminescence generating device according to claim 1, wherein said channel is a channel formed by solution processing of a small molecule.

25. (Previously Presented) The electroluminescence generating device according to claim 1, whereby said channel is a channel formed by a combination of sublimation and solution processing.

26. (Previously Presented) The electroluminescence generating device according to claim 1, wherein said channel is a channel formed by thermal, chemical or physical treatment of pre-deposited organic semiconductors.

27. (Previously Presented) The electroluminescence generating device according to claim 1, manufactured with printing techniques.

28. (Previously Presented) A method for generating electroluminescence using the device according to claim 1, by recombination of electrons and holes injected in the channel from said electron electrode and hole electrode.